Appl. No. 10/564,518

Response Dated May 4, 2010

Reply to Office Action of December 8, 2009

Amendments to the Claims:

The following listing of claims will replace all previous versions and listings of claims:

Claims:

1. (currently amended) A prosthesis comprising a flexible portion and at least one

less flexible portion, wherein said flexible portion comprises a fibre-reinforced

hydrogel containing chopped fibres, characterized in that fibres are wound around

and encompass the whole of the flexible portion and the at least one less flexible

portion to reinforce the prosthesis.

2. (previously presented) The prosthesis according to claim 1, characterized in that

said less flexible portion is provided on a bottom side and/or an upper side of said

flexible portion.

3. (previously presented) The prosthesis according to claim 1, characterized in that

said less flexible portion is an end plate.

4. (previously presented) The prosthesis according to claim 1, characterized in that

said less flexible portion is provided on an inner side of said flexible portion.

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5. (previously presented) The prosthesis according to claim 1, characterized in that

said prosthesis is for replacement of a joint in a human or animal.

(currently amended) The prosthesis according to claim 5, characterized in that 6.

said prosthesis is for replacement of a part or the whole of [[a]] an intervertebral

disc.

7. (previously presented) The prosthesis according to claim 1, characterized in that

said flexible portion has swelling characteristics comparable to those of a natural

intervertebral disc.

8. (previously presented) The prosthesis according to claim 1, characterized in that

said flexible portion consists of a slice of a fibre-reinforced hydrogel having a

thickness of 5-15 mm.

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9. (previously presented) The prosthesis according to claim 8, characterized in that said slice of fibre-reinforced hydrogel has a thickness of 8-10 mm.

10. (previously presented) The prosthesis according to claim 1, characterized in that said fibre-reinforced hydrogel comprises at least 5% fibres.

11. (previously presented) A prosthesis consisting of the prosthesis of claim 1, characterized in that the prosthesis is intended to replace cartilaginous materials.

12-20. (canceled)

- 21. (previously presented) A method of using a prosthesis comprising implanting the prosthesis of claim 1 in a human or an animal.
- 22. (previously presented) The method for according to claim 21, characterized in that the volume of the prosthesis is reduced prior to the implantation thereof by extracting water therefrom.

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23. (previously presented) The method according to claim 22, characterized in that

the volume of the prosthesis is reduced by immersing it in a hypertonic salt bath.

24. (presently presented) A method for manufacturing the prosthesis according to

claim 1, characterized in that the fibres are provided around the whole of the

flexible portion and at least one less flexible portion by winding to reinforce the

prosthesis.

25. (previously presented) The method according to claim 24, characterized in that

the angle at which the fibres are arranged with respect to an axis of rotation

varies from 5° to 90°.

26. (previously presented) The method according to claim 25, characterized in that

said angle varies from 45° to 60°.

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27. (previously presented) The prosthesis according to claim 1, characterized in that the flexible portion is prepared by forming a bar of the hydrogel from which slices are cut.

(canceled)

- 29. (previously presented) The prosthesis according to claim 27, characterized in that said slices are cut by setting up the bar on a lathe and moving a knife through the bar.
- (previously presented) The prosthesis according to claim 29, characterized in that said knife is lubricated during cutting.
- (previously presented) The prosthesis according to claim 1, characterized in that said fibres have a low elasticity modulus.

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 (previously presented) The prosthesis according to claim 31, characterized in that said fibres are capable of absorbing hydrogel monomers.

33. (previously presented) The prosthesis according to claim 31, characterized in that said fibres are made of polyurethane.

34-36. (canceled)